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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/815,350	03/31/2004	Richard Anthony Hatherill	WR7038532001	8277

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EXAMINER	
HAN, JASON	

ART UNIT	PAPER NUMBER
2875	

DATE MAILED: 11/23/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

H·A

Office Action Summary	Application No.	Applicant(s)	
	10/815,350	HATHERILL ET AL.	
	Examiner	Art Unit	
	Jason M. Han	2875	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *31 March 2004*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-28* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-28* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☒ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *31 March 2004* is/are: a)☐ accepted or b)☒ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Specification

1. The disclosure is objected to because of the following informalities:

a. Page 1, Paragraph 2, Line 3: Grammatical error – delete "do";

b. Page 4, Paragraph 21, Line 2: Typographical error – "LEDS" should read as "LEDs";

c. Page 5, Paragraph 27, Line 1: Grammatical error – "provide" should be in the past tense to read as "provided";

Appropriate correction is required.

Drawings

2. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the working light with reflector [Claim 25], and with at least one LED and a shaped reflector [Claim 28] must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate

changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Objections

3. Claim 4 is objected to because of the following informalities: Typographical error in Line 1 of the claim – "prove" should read as "provide". Appropriate correction is required.

4. Claims 3 and 12 are objected to because of the following informalities: Applicant should positively recite the reference to which the angles are applied to avoid any uncertainties and indefiniteness. Applicant is encouraged to use the term "optical axes" with further elucidation. Currently, the Examiner has applied the best-deemed interpretation in the rejections below. Appropriate correction is required.

5. Claim 21 is objected to because of the following informalities: Applicant recites "a microcontroller" in the claim, which is not supported in the specification. If Applicant is referring to the same microcontroller of Claim 20, then the Applicant should rewrite to read as "the microcontroller". Appropriate correction is required.

6. Claim 22 is objected to because of the following informalities: Applicant recites the limitation, "said microcontroller and momentary action switch", which lacks

antecedent basis. The Examiner has assumed the Applicant intended the claim to be dependent on Claim 21 rather than Claim 20 in the rejection below. Appropriate correction is required.

The following claims have been rejected in light of the specification, but rendered the broadest interpretation as construed by the Examiner [MPEP 2111].

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

7. Claims 1-2 are rejected under 35 U.S.C. 102(b) as being anticipated by McDermott (U.S. Patent 5782553).

8. With regards to Claim 1, McDermott discloses a lighting device including at least two LEDs [Figure 2: (L1, L2)] tilted away from each other to provide, in use, a high intensity beam pattern.

9. With regards to Claim 2, McDermott discloses the two LEDs being tilted away from each other to provide an elliptical beam pattern [Column 2, Line 65 – Column 3, Line 9; Column 7, Line 66 – Column 8, Line 14; Claim 15].

10. Claims 11 is rejected under 35 U.S.C. 102(b) as being anticipated by McDermott (U.S. Patent 5782553).

McDermott discloses at least two LEDs [Figure 2: (L1, L2)] tilted away from each other at an offset angle to each other to provide, in use, a high intensity elliptical beam [Column 2, Line 65 – Column 3, Line 9; Column 7, Line 66 – Column 8, Line 14; Claim 15].

11. Claim 28 is rejected under 35 U.S.C. 102(b) as being anticipated by Ueda et al. (U.S. Publication 2002/0006039).

Ueda discloses a lighting device incorporating at least one LED [Figure 4] and a shaped reflector [Figure 4: (2)] to provide an elliptical beam [Figure 4: (3)].

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

12. Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over McDermott (U.S. Patent 5782553).

McDermott discloses the claimed invention as cited above, but does not specifically teach the optical axes of the two LEDs being offset or tilted away from each other by eight degrees.

However, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the LEDs of McDermott to tilt away from one another by eight degrees, since it has been held that discovering an optimum value of a result effective variable involves only routine skill in the art. *In re Boesch*, 617 F.2d 272,

205 USPQ 215. In this case, altering the degree of tilt would provide a different shape for the illumination, providing a desired range or beam width, which is corroborated by McDermott [Column 2, Line 65 – Column 3, Line 9].

13. Claims 4-8 and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over McDermott (U.S. Patent 5782553) as applied to Claim 2 above, and further in view of Selkee et al. (U.S. Publication 2005/0018435).

14. With regard to Claims 4-6, McDermott discloses the claimed invention as cited above, but does not specifically teach an electronic circuit to provide a constant current to the LEDs independent of a supply voltage providing the current [re: Claim 4], wherein the circuit includes a microcontroller [re: Claim 6] that controls a switching regulator [re: Claim 5].

Selkee teaches an electronic circuitry that provides a constant current to the LEDs independent of a supply voltage providing the current [Figures 14, 16; Page 3, Paragraphs 34-35]. In addition, McDermott teaches the electronic circuit further including a microcontroller/processor [Page 4, Paragraph 37] that controls a switching regulator [Figures 14, 16: (34, 35)].

It would have been obvious to one ordinarily skilled in the art at the time of invention to modify the lighting device of McDermott to incorporate the electronic circuitry of Selkee in order to ensure that the current and voltage supplied to the LEDs remains constant, as well as provide an intense flashing light signal.

15. With regard to Claims 7-8 and 10, McDermott discloses the claimed invention as cited above, but does not specifically teach the current being provided by a plurality of

nickel-metal-hydride batteries [re: Claim 7], wherein said batteries being eight AA batteries [re: Claim 8]; nor teaches the current being provided by a fuel cell [re: Claim 10].

Selkee teaches a portable utility light, and discloses, "The rectangular housing 11 encloses dry cell alkaline or rechargeable batteries 12 such as metal hydride, nickel cadmium or lithium types" [Page 2, Paragraph 27].

It would have been obvious to one ordinarily skilled in the art at the time of invention to modify the lighting device of McDermott to incorporate the rechargeable batteries of Selkee in order to provide a constant power source that saves costs by not being disposed of. It is also obvious that the current provided could have been eight AA batteries or a fuel cell, which is considered a matter of design choice, since said batteries or fuel cell are commonly known within the art, and in this case would be a suitable, portable, and/or sufficient means for powering the lighting device. It is also obvious that the simple fact that the applicant claims to various power sources is a matter of design and not a major patentable distinction of the current invention.

16. Claim 9 is rejected under 35 U.S.C. 103(a) as being unpatentable over McDermott (U.S. Patent 5782553) as applied to Claim 4 above, and further in view of Krietzman et al. (U.S. Publication 2002/0030994).

McDermott discloses the claimed invention as cited above, but does not specifically teach the current being controlled via a momentary switch.

Krietzman teaches a portable light that utilizes a momentary switch [Figure 1: (300)].

It would have been obvious to one ordinarily skilled in the art at the time of invention to modify the lighting device of McDermott to incorporate the momentary switch of Krietzman for the commonly known benefit of altering/controlling the illumination intensity or duration.

17. Claim 27 is rejected under 35 U.S.C. 103(a) as being unpatentable over McDermott (U.S. Patent 5782553) as applied to Claim 1 above, and further in view of Ciallella et al. (U.S. Patent 5213412).

McDermott discloses the claimed invention as cited above, but does not specifically teach a detachable magnetic hook member to facilitate hanging the light from a suitable support.

Ciallella teaches a work light incorporating a detachable magnetic hook member [Figure 2: (44, 36, 60, 52)] that facilitates hanging the work light from a suitable support.

It would have been obvious to one ordinarily skilled in the art at the time of invention to modify the lighting device of McDermott to incorporate the detachable magnetic hook member of Ciallella, so as to provide convenient means to attach the light to a support and permit hands-free operation.

18. Claim 12 is rejected under 35 U.S.C. 103(a) as being unpatentable over McDermott (U.S. Patent 5782553).

McDermott discloses the claimed invention as cited above, but does not specifically teach the optical axes of the two LEDs being offset or tilted away from each other by eight degrees.

However, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the LEDs of McDermott to tilt away from one another by eight degrees, since it has been held that discovering an optimum value of a result effective variable involves only routine skill in the art. *In re Boesch*, 617 F.2d 272, 205 USPQ 215. In this case, altering the degree of tilt would provide a different shape for the illumination, providing a desired range or beam width, which is corroborated by McDermott [Column 2, Line 65 – Column 3, Line 9].

19. Claims 13-17 and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over McDermott (U.S. Patent 5782553) as applied to Claim 11 above, and further in view of Selkee et al. (U.S. Publication 2005/0018435).

20. With regard to Claims 13-15, McDermott discloses the claimed invention as cited above, but does not specifically teach an electronic circuit to provide a constant current to the LEDs independent of a supply voltage providing the current [re: Claim 13], wherein the circuit includes a microcontroller [re: Claim 15] that controls a switching regulator [re: Claim 14].

Selkee teaches an electronic circuitry that provides a constant current to the LEDs independent of a supply voltage providing the current [Figures 14, 16; Page 3, Paragraphs 34-35]. In addition, McDermott teaches the electronic circuit further including a microcontroller/processor [Page 4, Paragraph 37] that controls a switching regulator [Figures 14, 16: (34, 35)].

It would have been obvious to one ordinarily skilled in the art at the time of invention to modify the lighting device of McDermott to incorporate the electronic

circuitry of Selkee in order to ensure that the current and voltage supplied to the LEDs remains constant, as well as provide an intense flashing light signal.

21. With regard to Claims 16-17 and 19, McDermott discloses the claimed invention as cited above, but does not specifically teach the current being provided by a plurality of nickel-metal-hydride batteries [re: Claim 16], wherein said batteries being eight AA batteries [re: Claim 17]; nor teaches the current being provided by a fuel cell [re: Claim 19].

Selkee teaches a portable utility light, and discloses, "The rectangular housing 11 encloses dry cell alkaline or rechargeable batteries 12 such as metal hydride, nickel cadmium or lithium types" [Page 2, Paragraph 27].

It would have been obvious to one ordinarily skilled in the art at the time of invention to modify the lighting device of McDermott to incorporate the rechargeable batteries of Selkee in order to provide a constant power source that saves costs by not being disposed of. It is also obvious that the current provided could have been eight AA batteries or a fuel cell, which is considered a matter of design choice, since said batteries or fuel cell are commonly known within the art, and in this case would be a suitable, portable, and/or sufficient means for powering the lighting device. It is also obvious that the simple fact that the applicant claims to various power sources is a matter of design and not a major patentable distinction of the current invention.

22. Claim 18 is rejected under 35 U.S.C. 103(a) as being unpatentable over McDermott (U.S. Patent 5782553) as applied to Claim 13 above, and further in view of Krietzman et al. (U.S. Publication 2002/0030994).

McDermott discloses the claimed invention as cited above, but does not specifically teach the current being controlled via a momentary switch.

Krietzman teaches a portable light that utilizes a momentary switch [Figure 1: (300)].

It would have been obvious to one ordinarily skilled in the art at the time of invention to modify the lighting device of McDermott to incorporate the momentary switch of Krietzman for the commonly known benefit of altering/controlling the illumination intensity or duration.

23. Claims 20 and 24-26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Twardawski (U.S. Patent 2004/0141316) in view of Selkee et al. (U.S. Publication 2005/0018435), and further in view of Stopa (U.S. Publication 2004/0155844).

24. With regards to Claim 20, Twardawski discloses a lighting device including:

- At least two LEDs [Figure 3: (30, 34)] tilted away from each other at an offset angle to provide, in use, a high intensity elliptical beam; it should also be noted that it has been held that a recitation with respect to the manner in which a claimed apparatus is intended to be employed does not differentiate the claimed apparatus from a prior art apparatus satisfying the claimed structural limitations. *Ex parte Masham*, 2 USPQ2d 1647 (1987);
- Said LEDs being enclosed within a first portion [Figure 1: (12)] of a housing [Figure 1: (10, 12, 14)];
- Batteries [Page 4, Paragraph 48] enclosed within a second portion [Figure 1: (14)] of said housing; and

- Said first and second portions being interconnected by a flexible neck portion [Figure 3: (66, 68); Page 5, Paragraph 57)].

Twardawski does not specifically teach the batteries being eight NiMH-AA batteries.

Selkee teaches a portable utility light, and discloses, "The rectangular housing 11 encloses dry cell alkaline or rechargeable batteries 12 such as metal hydride, nickel cadmium or lithium types" [Page 2, Paragraph 27].

Neither Twardawski nor Selkee specifically teaches an electronic circuit including a switching regulator and microcontroller connected to provide, in use, a constant current to the LEDs independent of the voltage supplied by the AA batteries.

Stopa teaches an electronic circuit including a switching regulator and microcontroller connected to provide, in use, a constant current to LEDs independent of a voltage supplied [Abstract].

It would have been obvious to one ordinarily skilled in the art at the time of invention to modify the lighting device of Twardawski to incorporate the rechargeable batteries of Selkee in order to provide a constant power source that saves costs by not being disposed of. It is also obvious that the current provided could have been eight AA batteries, which is considered a matter of design choice, since said batteries are commonly known within the art, and in this case would be a suitable, portable, and/or sufficient means for powering the lighting device.

It would then have been advantageous and obvious to one ordinarily skilled in the art at the time of invention to modify the lighting device of Twardawski in view of

Selkee to further incorporate the electronic circuit of Stopa in order to ensure that the current and voltage supplied to the LEDs remains constant, as well as permit precise control of current to provide various light emission patterns.

25. With regards to Claim 24, Twardawski in view of Selkee, and further in view of Stopa discloses the claimed invention as cited above. In addition, Twardawski teaches including a lens [Figure 3: (42, 44)] to modify the shape of the beam.

26. With regards to Claim 25, Twardawski in view of Selkee, and further in view of Stopa discloses the claimed invention as cited above. In addition, Twardawki teaches including a reflector [Page 3, Paragraph 27] to modify the shape of the beam.

27. With regards to Claim 26, Twardawski in view of Selkee, and further in view of Stopa discloses the claimed invention as cited above, but does not specifically teach the shape of the beam being modified by changing the angle of the LEDs to each other. However, it would have been obvious to one having ordinary skill in the art at the time the invention was made to adjust the angle between the LEDs, since it has been held that rearranging parts of an invention involves only routine skill in the art. *In re Japiske*, 86 USPQ 70. In this case, rearrangement of the angle would obviously affect the illumination to provide a desired shape or width.

28. Claims 21-22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Twardawski (U.S. Patent 2004/0141316) in view of Selkee et al. (U.S. Publication 2005/0018435) and Stopa (U.S. Publication 2004/0155844) as applied to Claim 20 above, and further in view of Rachwal (U.S. Patent 6140776).

Twardawski in view of Selkee and Stopa discloses the claimed invention as cited above, but does not specifically teach a momentary action switch in combination with the microcontroller to control the regulator (re: Claim 21) to affect the intensity of the light beam (re: Claim 22).

Rachwal teaches a switching regulator [Figure 4: (60)] connected to a momentary switch [Figure 4: (18b)] in order to control the intensity or brightness of a light emitting diode [Figure 4: (14b)].

It would have been obvious to one ordinarily skilled in the art at the time of invention to modify the microcontroller of Twardawski in view of Selkee and Stopa to utilize a momentary switch in controlling the switching regulator, as taught by Rachwal, in order to alter the brightness or intensity of the illumination, and thus provide greater control to a desired preference or accommodate to specific environments/circumstances.

29. Claim 23 is rejected under 35 U.S.C. 103(a) as being unpatentable over Twardawski (U.S. Patent 2004/0141316) in view of Selkee et al. (U.S. Publication 2005/0018435) and Stopa (U.S. Publication 2004/0155844) as applied to Claim 20 above, and further in view of Collins (U.S. Patent 4342953).

Twardawski in view of Selkee and Stopa discloses the claimed invention as cited above, but does not specifically teach a sensing circuit to prevent complete discharge of the batteries.

Collins teaches a sensing circuit for a portable lamp device that employs rechargeable batteries, whereby the circuit prevents complete discharge of the batteries [Claim 5, Limitation (i)].

It would have been obvious to one ordinarily skilled in the art at the time of invention to modify the lighting device of Twardawski in view of Selkee and Stopa to incorporate the sensing circuit of Collins in order to protect and prevent over discharge of the batteries.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

The following references are cited to further show the state of the art pertinent to the current application, but are not considered exhaustive:

US Patent 6109766 to Baliozian;

US Patent 6357893 to Belliveau;

US Patent 6585395 to Luk;

US Publication 2004/0223342 to Klipstein et al.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jason M. Han whose telephone number is (571) 272-2207. The examiner can normally be reached on 8:00am-5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Sandra O'Shea can be reached on (571) 272-2378. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

JMH (11/18/2005)

Stephen Husar
Primary Examiner